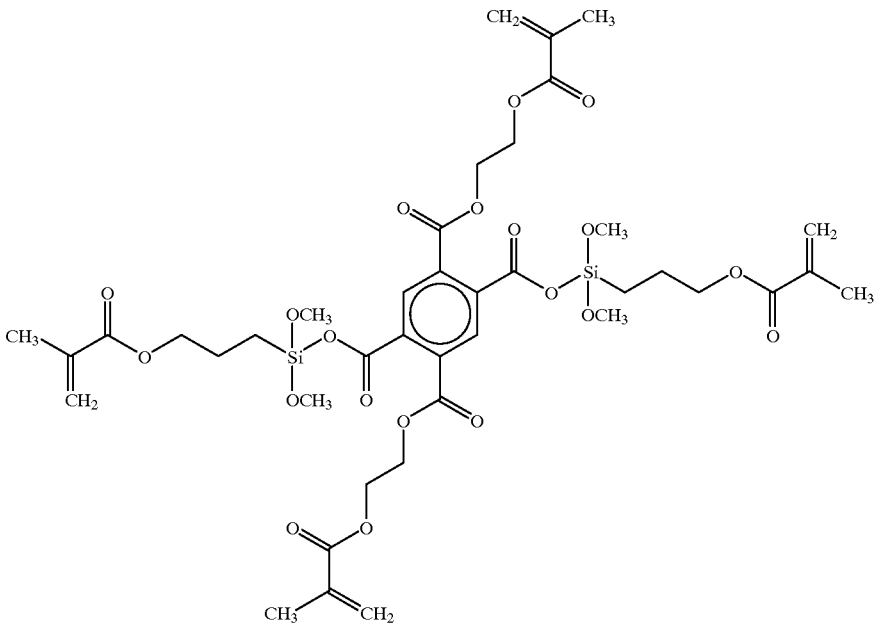
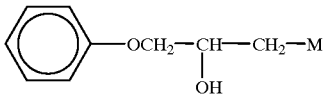
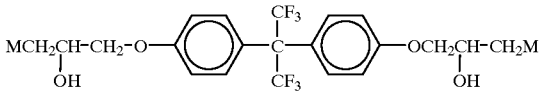


The synthesis procedures described in these examples were successfully applied to yield MPTMS silylated resins from the following hydroxylated monomers:

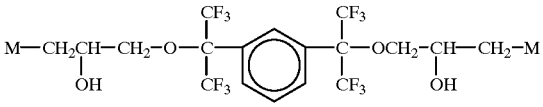


2-hydroxy-1-methacryloxy-3-phenoxypropane



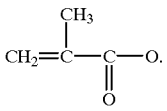
6F-Bis-GMA,

and



Bis(1-methacryloxy-2-hydroxy-1', 3'-hexafluoro isopropyl)benzene

in which M is

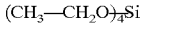


In addition, this general synthetic procedure was applied to mixtures of hydroxylated monomers, e.g., Bis-GMA plus P-hydroxyethylmethacrylate ("HEMA").

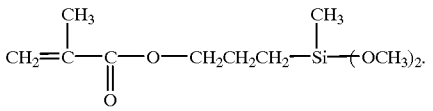
The same general synthesis was applied to carboxylic acid containing monomers such as PMDM and amine containing monomer such as t-butylaminoethyl methacrylate to produce silylated resins based on these types of functionalized monomers.

A variety of silanes can be utilized in the preparation of silylated resins. By utilizing the general procedure described in the example, silylated derivatives of Bis-GMA have been obtained in excellent yield (>90%) by employing the following silanes as coreactants with Bis-GMA: methyltriethoxysilane; n-propyltrimethoxysilane; n-decyltriethoxysilane; tridecafluoro-1,1,2,2-tetrahydrooctyltriethoxysilane; 3-methacryloxypropyltriethoxysilane; 3-methacryloxypropyltriacetoxysilane; and 10-methacryloxydecyltrimethoxysilane.

In addition, the synthetic procedure described in the example was successfully applied to the synthesis of silylated Bis-GMA resins when the silane coreactant was a tetraalkoxysilane such as tetraetboxysilane:



or a dialkoxysilane such as 3-methacryloxypropylmethyldimethoxysilane:



Thus, other hydroxylated monomers, such as, for example, HEMA, as well as monomers with other types of active groups, such as, for example, COOH, also can be silylated with MPTMS. A wide spectrum of silylated resins, therefore, can be prepared through exchange reactions involving hydroxylated, aminated, carboxylated, and other protic types of functionalized monomers and oligomers.